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ABSTRACT

This booklet contains 36 one-page "success stories" that reveal how the two-year colleges and the vocational and adult education system in Ohio are responding to business and industry needs with innovative problem solving and effective partnerships. Each profile includes a challenge, a solution, results, and comments from business persons that were helped by programs of the colleges or the vocational and adult educational system. Subjects of some of the programs profiled include the following: improving quality and productivity through statistical process control training; reducing overtime and scrap costs by assessing high-tech skills; improving productivity through employee cross-training; increasing the availability of trained automotive technicians; overcoming barriers to employment in rural southwest Ohio; improving quality and profitability through technical writing; upgrading employee skills in response to new technologies; implementing industry-driven skill standards through a statewide initiative; reducing employee turnover through preemployment training; using a cost-effective consortium approach to ISO 9000 certification training; opening a new facility with employees fully trained and certified; reducing employee prescreening and training costs with a simulated production program; matching an employer's specific protocol with customized training; addressing the future need for electricians through school-to-work partnership; improving performance by developing employees' math application skills; and providing sophisticated machinist training for high-technology environments. (KC)

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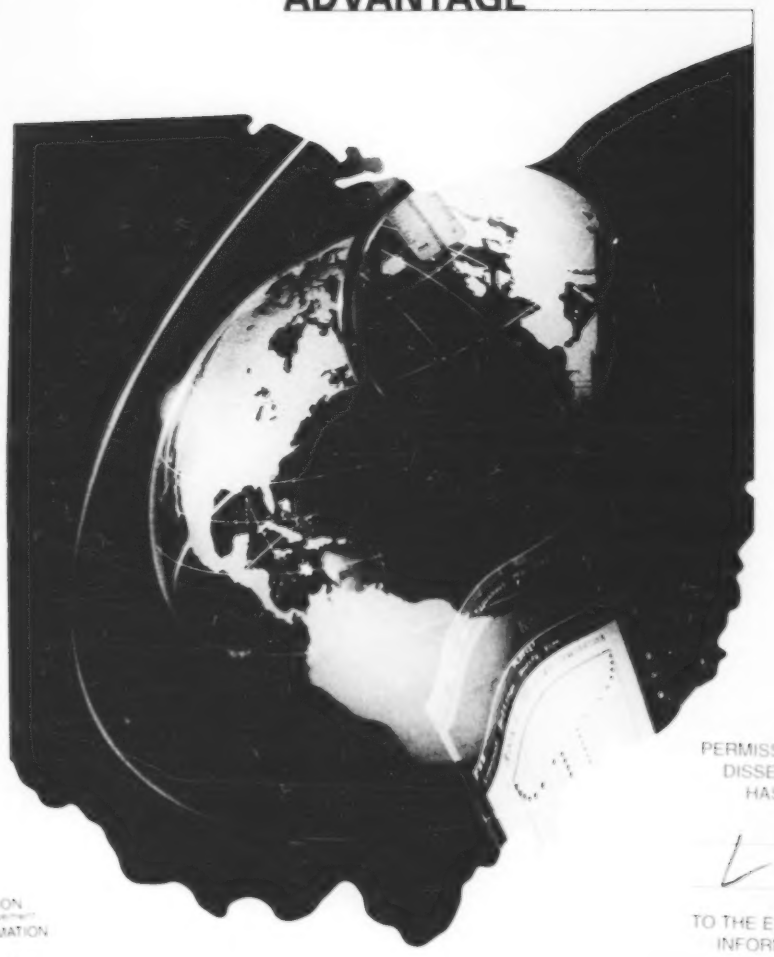
OHIO's ECONOMIC ADVANTAGE



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Enhancing Workforce ***Performance***

Improving Business ***Results***

Increasing Global ***Competitiveness***

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CE 074 812

Ohio Board of Regents

Ohio Bureau of Employment Services

Ohio Department of Education

Ohio's Economic Advantage

Enhancing workforce performance. Improving business results. Increasing global competitiveness. These are the keys to maintaining Ohio's economic advantage into the 21st century.

The continued growth of Ohio business and industry depends on a network of resources to ensure that the state's workforce development efforts keep pace with rapid technological changes and the evolving challenges of a global economy. Our long-term economic success will be determined in no small measure by our ability to use innovative strategies to build — and sustain — a world-class workforce.

Three state agencies are collaborating to help Ohio meet this challenge. The Ohio Bureau of Employment Services helps employers statewide identify their short-term and long-term employment needs and access appropriate resources for meeting those needs. In carrying out its mission, the Bureau actively promotes — and capitalizes on — two key resources: Ohio's public two-year campuses, which operate the Business and Industry Training Centers of the EnterpriseOhio Network, and the state's vocational and adult education system. Both of these systems have proven records of success in linking with employers statewide and meeting their needs for world-class training and performance improvement. By providing results-oriented solutions to a wide range of business and industry challenges, these agencies are developing the skilled workforce Ohio needs to be competitive today and in the 21st century.

In this booklet, you will find an array of "success stories" that reveal how our two-year campuses and our vocational and adult education system are responding to business and industry needs with innovative problem solving and effective partnerships. These success stories are compelling evidence of Ohio's readiness to meet the workforce development and business performance improvement challenges of the new millennium.

George V. Voinovich
Governor, State of Ohio

Workforce Development Challenges

The world has changed. There was a time when competitive advantage depended on control of capital, technology and natural resources. Today, however, competitive advantage depends most critically on the skills of the workforce.

In the global marketplace, rapidly changing job markets and new technologies require individuals to have broad-based, transferable skills. New jobs require higher levels of academic, occupational, technological and employability skills. Advanced education, specialized training and lifelong learning are becoming more and more important.

As the workplace changes, so is the way people are being trained for entry into and advancement throughout their careers. Business and industry increasingly need assistance in educating, training and retraining their employees. These realities pose two distinct — and fundamental — challenges:

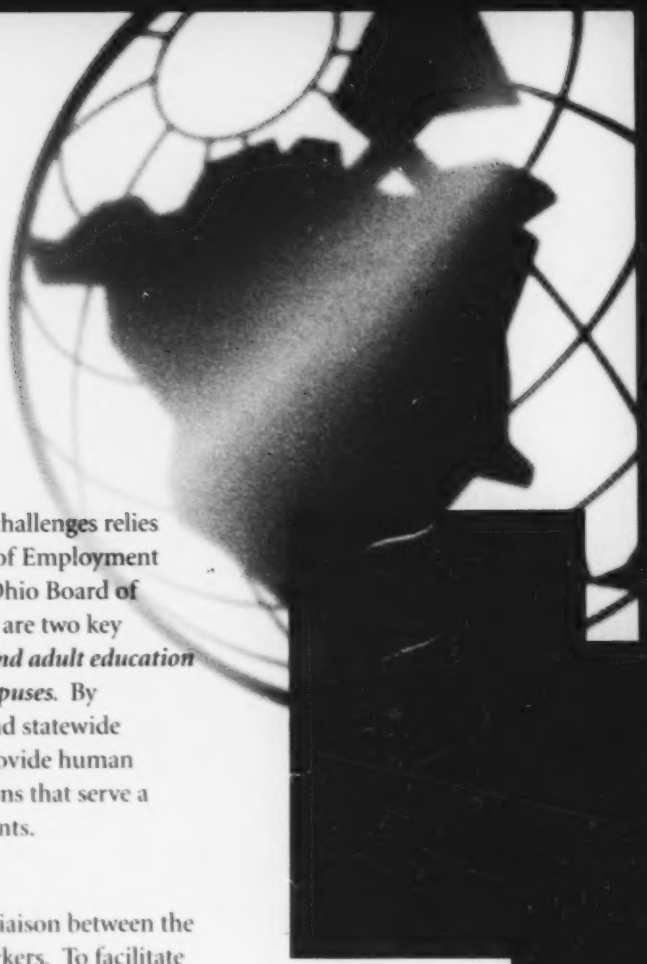
- **Long-term workforce development challenges.**

  Ohio faces the long-term challenge of preparing a steady, dependable pipeline of highly skilled, adaptive workers for the 21st century. In addition to solid academic skills, workers will need a greater array of technical, organizational and interpersonal skills than ever before. In many cases, they will need to be prepared for jobs that do not even exist today.

- **Immediate business performance improvement challenges.**

  Ohio also faces the challenge of providing resources to help business and industry retrain the existing workforce and upgrade current employees' skills. As fierce competition drives all companies to redefine work-site cultures and enhance productivity and quality, the need for business performance improvement training for all levels of employees is increasing dramatically.

Ohio's ability to respond to these challenges will determine the state's long-term economic well being.



Partnerships for Success

Ohio's successful response to workforce development challenges relies heavily on the close collaboration of the Ohio Bureau of Employment Services, the Ohio Department of Education and the Ohio Board of Regents. At the heart of this multi-agency partnership are two key workforce development resources: Ohio's ***vocational and adult education system***, and the state's network of ***public two-year campuses***. By promoting and facilitating the development of local and statewide business-education partnerships, these two systems provide human resource development and customized training solutions that serve a wide range of business, industry and public-sector clients.

Ohio Bureau of Employment Services

The Ohio Bureau of Employment Services serves as a liaison between the state's 220,000 employers and more than 5 million workers. To facilitate employers' investment in their employees, the agency develops customer service centers and one-stop employment and training systems, promotes national skill standards, links employers to customized training resources and participates in School-to-Work programs throughout the state.

Vocational and Adult Education

Ohio's vocational and adult education system is one of the state's primary resources for training and retraining the state's workforce. Vocational education in Ohio is provided through a unified delivery system that annually serves more than one million youths and adults through local public school systems in each of Ohio's 88 counties.

The vocational and adult education system serves two primary functions: (1) to develop occupational skills, academic skills and employability skills of adult and high school students; and (2) to solve problems for a wide range of businesses, industries and other organizations in the private and public sectors.

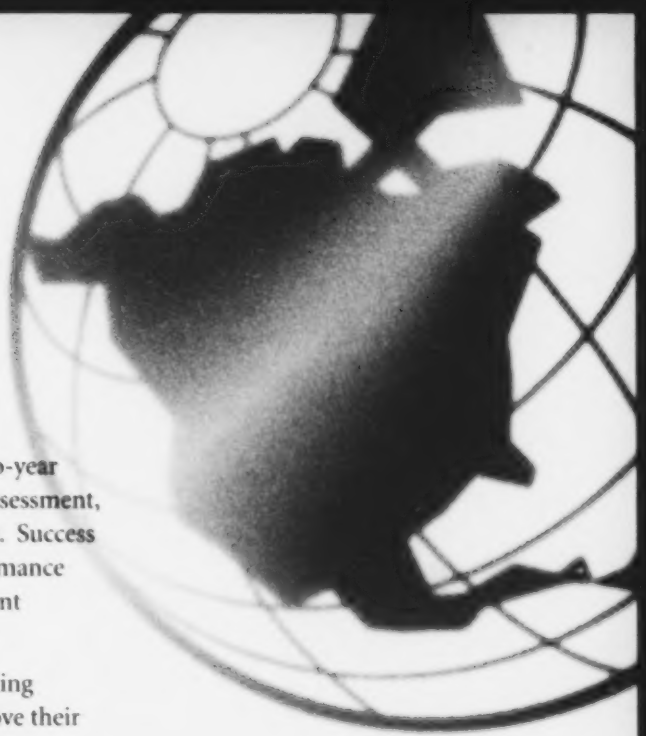
Ohio's vocational education system has two core components:

- **Secondary Vocational Education** provides a variety of career pathways to develop the occupational, academic and employability skills needed to move directly into the workforce or on to additional levels of education or training. Secondary vocational education programs help meet Ohio's long-term workforce development needs by providing skilled workers with documented capabilities.
- **Adult Vocational Education** serves individual adult students as well as business and industry clients. Comprehensive workforce training services and programs include job profiles, employee testing and assessment, technical skill training and upgrading, customized on-site or off-site workforce training programs, seminar development, career counseling and job placement. Specific offerings are determined by the local labor market and the needs of local businesses and industries. Adult vocational education training provides flexible programming to improve on-the-job performance and employability options.

In response to new and changing workforce realities, vocational and adult education launched a bold new long-range strategic plan in 1997. "Ohio's Future at Work: Beyond 2000" reflects a renewed commitment to results — to ensuring that individuals have credentials based on industry standards, and the knowledge and skills they need to compete in a global marketplace. One of the plan's target priorities is to ensure a culture of continuous improvement and innovation, a prerequisite for meeting the changing workforce development needs of Ohio's employers.

Two-Year Campuses

Ohio's 53 public two-year colleges and regional university campuses are key components of the state's economic development infrastructure. Partnering with business, industry and public-sector organizations across Ohio, the two-year campuses help to improve quality, productivity and competitive ability through employee training and related developmental activities. Campus-based Business and Industry Training Centers of the EnterpriseOhio Network offer companies proven assistance in designing and implementing the results-oriented employee training and related services required for improved business performance.



Workforce development services provided by Ohio's public two-year campuses include training plan development, employee skill assessment, customized training and employee selection support assistance. Success depends on linking employee training to the company's performance improvement strategies and ensuring that the work environment supports application of the new skills.

Like the companies they serve, the Business and Industry Training Centers at Ohio's two-year campuses must continuously improve their operations. Recognizing this shared need, the two-year campuses established the EnterpriseOhio Network of Business and Industry Training Centers in 1986 as a collaborative vehicle for building their individual and collective capability to help companies turn employee training into a powerful tool for improving productivity and quality.

The EnterpriseOhio Network of Business and Industry Training Centers maintains a solid reputation as proven providers of increasingly diverse services that enhance workplace performance, company competitiveness and business results.

Innovative Solutions

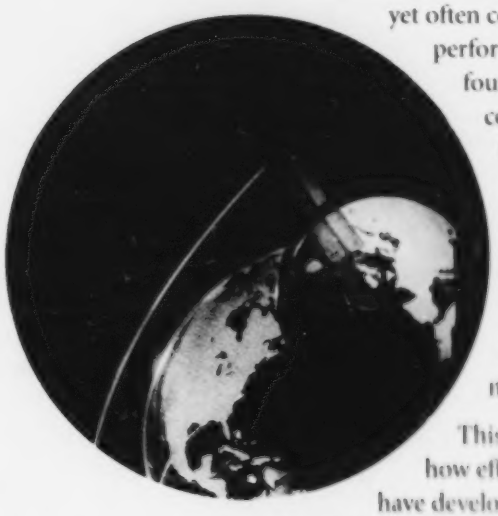
Ohio's vocational and adult education system and the state's network of two-year campuses are improving Ohio's competitiveness by developing a high-skills, high-quality and high-performance workforce.

To meet ***long-term workforce development needs,*** secondary vocational education programs and two-year campus programs build partnerships with companies, collaborate with other state agencies and leverage all partners' resources to change the way individuals prepare for the workforce. For example, School-to-Work programs prepare learners of all ages for successful entry into and advancement through the world of work by integrating school-based learning and work-based learning. Tech Prep programs offer at least four years of sequential course work at the secondary and postsecondary levels to prepare students for technical careers. New and exciting partnerships that improve the connection between classrooms and workplaces are constantly being developed.

Immediate performance improvement challenges such as increasing productivity and quality, or containing costs, are resolved by dynamic workforce training and other supportive improvements in the work environment. Ohio's two-year campuses, through their EnterpriseOhio Network of Business and Industry Training Centers, and the state's vocational and adult education system provide companies with a wide variety of prepared and customized programs to develop the skills employers and employees need in order to sharpen their competitive edge. These services and programs include job profiles, employee skill assessments, on-site and off-site training programs, customized training to upgrade and enhance skills, continuing education programs, seminars, workshops and more.

Improved Results

As customer-driven providers, both the vocational and adult education system and the EnterpriseOhio Network of Business and Industry Training Centers are accountable to the local communities they serve for providing cost-effective services and positive, bottom-line results. The innovative solutions these state agencies provide to common yet often complex workforce development and performance improvement challenges are a foundation on which to build the state's competitiveness. They are, in fact, the keys to continuing economic security and prosperity for Ohio employers and workers. Ohio is both fortunate and proud to have readily at hand such powerful resources for developing and implementing the strategic partnerships that today's highly competitive global marketplace demands.

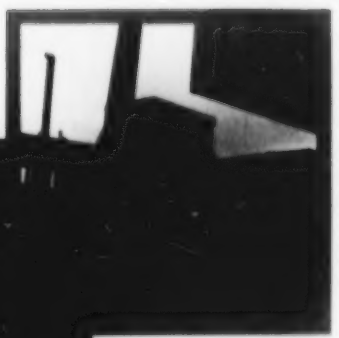


This book is filled with real-life examples of how effective business-education partnerships have developed and applied innovative, knowledge-enhancing and skill-building solutions to address both short-term and long-term workforce development needs. Individually and collectively, these "success stories" are testimonials to Ohio's resourcefulness in responding to the challenges of the global marketplace.

Statistical Process Control Training Improves Quality and Productivity

"MATC's flexibility made them the best training choice for our company. The statistical process training they provide has helped to improve quality and reduce our ratio of warranty claims to sales."

Ed McJessy
MIS Director
Detroit Diesel
Remanufacturing East
Cambridge, Ohio



Muskingum Area Technical College provides statistical process control training for Detroit Diesel Remanufacturing East in Cambridge. The company remanufactures motor truck diesel engines and engine components.

Challenge

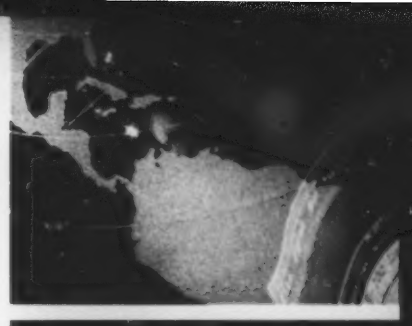
The company, formerly called Bliss Industries, was purchased by Detroit Diesel Corporation in 1988 and was challenged by the new ownership to improve overall quality and productivity. The specific quality improvement goal was to be able to correctly evaluate a used engine for the salvage value of its components, and to remanufacture and completely reassemble the engine to a quality standard equal or superior to original factory engine specifications. The remanufacture had to be done at a profit and with a minimum of warranty claims on the remanufactured engine.

Solution

Muskingum Area Technical College (MATC) was asked to develop and deliver customized statistical process control training to all employees. MATC developed a curriculum of 20 hours of statistical process control and 30 hours of statistical problem solving. Classes began in 1988 and have continued to the present time. Nearly 500 employees have received training, including all new hires.

Results

The most obvious result of the training is that the plant is viable, growing and taking on new work. The plant has recently obtained a new engine crankshaft remanufacturing line, for which MATC has provided a class on Geometric Dimensioning and Tolerancing to train employees in reading and interpreting a new type of engineering drawing. The company also has experienced a significant decrease in the ratio of warranty claims to sales — from 5.30 percent in 1987, to 2.34 percent in 1992, to 1.80 percent in 1996. An additional benefit of the problem-solving training is that floor teams now conduct all new employee interviewing and hiring and are responsible for evaluating and making equipment purchasing decisions.



Reducing Overtime and Scrap Costs by Assessing High-Tech Skills

Miami Valley Career Technology Center (CTC) helped Creative Extruded Products in Tipp City implement a continuous improvement program to improve quality and reduce costs.

Challenge

Creative Extruded Products, a profile extruder company for the automotive industry located in southwestern Ohio, was experiencing a 33 percent employee turnover rate, logging average monthly overtime of 1,388 hours and recording scrap expenditures of more than $925,000 annually. To address these problems, Creative Extruded Products launched a company-wide continuous improvement program, which included creating a new job position with direct responsibility for product development and quality.

Solution

Miami Valley CTC implemented Work Keys, a national workforce assessment system, to assess the skills needed to successfully fill the new production technician position, which was created by combining the job responsibilities from three existing positions. The new position required skills such as analyzing problems and applied technology skills and was expanded to include additional responsibilities. Along with the job profile, a job task analysis was conducted to develop a better on-the-job training program. Miami Valley CTC and Creative Extruded Products have profiled the position several times to ensure that it continues to meet the changing needs of the company.

Results

The continuous improvement program, which has been in place about three years, has helped to reduce training time for Creative Extruded Products employees from six months to two months. One year after implementing the program, the company had virtually eliminated employee turnover, reduced average monthly overtime by 95 percent and lowered scrap expenditures by 21 percent. After two years, the company had saved approximately $973,000 in overtime and scrap reduction costs.

Bill Cordial

Improved Productivity Through Employee Cross-Training

> "Our employees have received structured on-the-job training, job task analysis training, and leadership training from The Alber Enterprise Center at the OSU-Marion campus – training that has led to tangible and intangible improvements."
>
> **Frank Gibson**
> Plant Manager
> Hydraulics, Inc.
> Marion, Ohio

The George H. Alber Enterprise Center of The Ohio State University's Marion Campus, part of the EnterpriseOhio Network of Business and Industry Training Centers, provides Hydraulics, Inc. in Marion with structured on-the-job cross-training to improve employee productivity.

Challenge

Hydraulics, Inc. serves its parent company, Continental Hose in Upper Sandusky, as a warehouse packaging distribution center. The Marion facility was cross-training 50 employees to improve productivity as quickly as possible. However, the training the company was providing was not driven by up-to-date job task analyses and was not part of a structured training plan.

Solution

The Alber Enterprise Center and the Hydraulics, Inc. staff determined that a structured on-the-job training program would be implemented as part of a carefully designed training plan based on task analysis for various jobs. The training was targeted at scheduling and shipping/receiving positions as well as cycle counters, pickers, steel line packers, power steering packers and brake hose packers. The Alber Enterprise Center began developing a structured plan by completing a careful job task analysis for each of the targeted positions. This resulted in thorough documentation including job descriptions, job content reports, certification checklists, procedure manuals and performance appraisal forms. Through the job analysis process, training plans were developed that enabled employees to perform a variety of jobs. As part of this new training program, the company documented training in order to create a competitive salary package based on skill level.

Results

With the Alber Enterprise Center's successful design and structuring of on-the-job training, Hydraulics, Inc. employees achieved the targeted productivity levels four to five times faster than would have been possible using the previous approach to on-the-job training. The company now documents on-the-job performance and offers a compensation program that rewards advanced performance.

Increasing the Availability of Trained Automotive Technicians

Thirteen vocational centers in Ohio have been identified as Automotive Youth Educational System (AYES) sites. This partnership between automobile manufacturers, local dealers and Ohio's vocational education system is designed to serve the needs of the automotive industry by providing background training for entry-level automotive service technicians. Vocational centers in Clayton, Parma, Brecksville, Oregon, Shelby, Warren, Bethel, Hamilton, Cincinnati, Xenia, Springfield, Canfield and Groveport have been designated as AYES sites, and currently are working with local General Motors and Chrysler dealerships.

Challenge

American automobile dealerships face a growing challenge: finding enough qualified service technicians to meet the increasing demand for these highly skilled workers. An estimated 60,000 new automotive service technicians are needed each year in the automotive service industry. In Ohio and across the nation, not enough students are pursuing this career to meet rising industry demands.

Solution

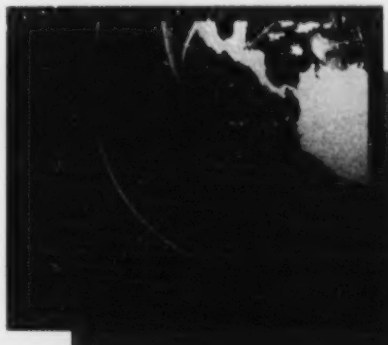
The 13 participating vocational centers partnered with local General Motors and Chrysler dealerships through AYES to train students in automotive service and maintenance. AYES identifies trained mentors within automobile dealerships who provide high quality training for all AYES students. Once students graduate from high school and receive AYES certificates, they have a strong foundation in automotive systems and electronics, as well as valuable on-the-job training. As a result, they are well-qualified for immediate hire as entry-level service technicians.

Results

The AYES program is relatively new to Ohio. Initial results indicate that dealers are pleased with the quality of students' training. Mentors who work with AYES students have demonstrated increased productivity and earning potential. AYES is expected to expand the program to include all automotive dealers and independent service garages in Ohio.

"AYES is a great way for high school students to experience careers in the automotive job market and a great way for the automotive industry to recruit future technicians."

Chuck Murphree
Training Center Manager
General Motors
Parma, Ohio



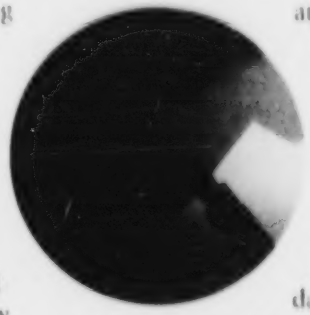
Overcoming Barriers to Employment in Rural Southwest Ohio

> "The work Great Oaks has done has been extremely beneficial in helping us hire qualified individuals we might not have otherwise been in contact with."
>
> **Judy Mason**
> Assistant Manager of Human Resources -
> Candle-Lite
> Leesburg, Ohio

Great Oaks Institute of Technology and Career Development joined forces with hundreds of companies in rural southwest Ohio and government agencies such as the Ohio Bureau of Employment Services and the Ohio Department of Human Services to find recruiting solutions for area companies through a program called Project Hire.

Challenge

Companies in rural southwest Ohio, including Airborne Express, an overnight package delivery service, and Candle-Lite, the nation's largest manufacturer of candles, face a number of problems in recruiting employees. The area's low unemployment rate, combined with barriers such as lack of child care and lack of transportation to and from work, limit access to a dependable workforce. Project Hire was developed at the request of Governor George V. Voinovich to help companies develop a productive, dependable workforce.



Solution

The Great Oaks Institute of Technology and Career Development worked with area companies and local agencies to identify outreach and recruitment solutions. After shadowing employees to develop job profiles, representatives from Great Oaks coordinated, promoted and staffed job recruitment days for the companies. Great Oaks also is working with local agencies to determine the transportation resources available in the area and to identify companies that have effective child care systems and other potential local child care sites.

Results

Eight job recruitment days have been held since the project was initiated nearly two years ago, with each one attracting between 104 and 579 prospective employees. Through the job recruitment days, Airborne Express has hired more than 200 new employees and Candle-Lite has hired more than 755 new employees.

Improving Quality and Profitability Through Technical Writing Training

Lakeland Community College's Center for Business and Industry in Kirtland provided Ricerca, Inc. with customized technical writing training that has improved the quality of the company's research reports and reduced the amount of time it takes to produce them.

Challenge

Known for its high quality research reports, Ricerca, Inc. is a contract chemical research laboratory conducting independent research on pesticides and herbicides for use by its clients during the Environmental Protection Agency's approval process. The company's business performance challenge was to produce reports that were more reader-friendly while reducing the time spent to produce each report, thereby increasing bottom-line profits.

Solution

Lakeland Community College's Center for Business and Industry, a member of the EnterpriseOhio Network of Business and Industry Training Centers, and Ricerca, Inc. together recognized that an important way to improve production time was to reduce the time used for internal review and approval of reports prior to their final release. Lakeland's Center for Business and Industry proposed to: (a) customize a technical writing course in a way that would utilize the company's *actual* written reports in the course training, and (b) provide individualized consultation and assistance on feedback suggestions for improving the final reports. The training targeted managers as well as the technical writers they supervised. Trainers worked with managers while they reviewed actual report drafts to teach them techniques such as critiquing only matters of substance rather than style.

Results

Ricerca, Inc. reports that the customized training and assistance provided by the Lakeland Community College's Center for Business and Industry resulted in a marked increase in the readability of the reports. While results were positive for the entire company, one Ricerca business unit estimates that the average number of drafts of each report decreased from seven to three, saving the company approximately $6,000 on each report.

"Lakeland's technical writing training program was a big success. It was so well received by our employees that we extended the training to all of our business units."

Robert Baxter
Vice President
Ricerca, Inc.
Painesville, Ohio

Upgrading Employee Skills in Response to New Technologies

> "Columbus State understands the importance of flexibility to industry... and they are unique in their commitment to continually serve industry better. The training they have provided has helped us to better recognize our employees' skills."

Jim Orr
Senior Technical Instructor
Lucent Technologies
Columbus, Ohio

Columbus State Community College's Business and Industry Training Division and Electronic Engineering Division provided radio frequency technology training to technicians at the Columbus Works Plant of Lucent Technologies.

Challenge

The Columbus Works Plant is responsible for the manufacturing and testing of wireless equipment for telecommunications. Electronic technicians perform in-circuit function testing and trouble-shooting involved with evolving radio frequency technology. Many of the plant's electronic technicians were hired before the company required a working knowledge of radio frequency technology. Because of the increasing importance of this technology, Lucent Technologies needed to upgrade the skills of all of its electronic technicians so they could properly test products before shipping them to customers.

Solution

Lucent Technologies invited Columbus State Community College, a member of the EnterpriseOhio Network of Business and Industry Training Centers, to design and develop an introductory radio frequency technology training curriculum for its technicians. The College's Business and Industry Training Division partnered with its Electronic Engineering Department in developing the training curriculum. In consultation with Lucent's engineers and the company's Learning Center staff, the College designed a 30-hour curriculum to provide an entry-level introduction and orientation to radio frequency technology. The College also proposed that Lucent's management design an internal development plan for on-the-job training following the technicians' participation in classroom training.

Results

Groups of technicians completed the radio frequency training and are effectively using their new skills on the job. In relying on the locally accessible Columbus State Community College instead of an out-of-state consulting and training firm, Lucent realized substantial savings in its training budget.

Statewide Initiative Implements Industry-Driven Skill Standards

Eight vocational centers, including Dayton City Schools, Findlay High School, Miami Valley Career Technology Center, Mid-East Ohio Vocational School, Polaris Career Center, Southern Hills Joint Vocational School, Trumbull County Joint Vocational School and Vanguard Sentinel Vocational Center, as well as Muskingum Area Technical College, have joined with several state agencies and the National Institute for Metalworking Skills to implement instruction that reflects industry-validated skill standards for existing and potential metalworkers.

Challenge

The National Institute for Metalworking Skills (NIMS) was formed in 1995 to address the need for a skilled workforce in the metalworking industry. The industry needed consistent, industry-driven and industry-validated skill standards for existing and potential workers. It also needed certified training programs to provide instruction that reflects those skill standards. This challenge is underscored by the fact that manufacturers face severe skilled labor shortages and that many current metalworkers will retire within the next five to ten years.

Solution

NIMS formed a partnership with the Ohio Department of Education, the Ohio Bureau of Employment Services, the Ohio Department of Development, eight vocational machine trades programs, one Ohio post-secondary metalworking program and numerous manufacturers in Ohio and across the nation. A pilot program was developed at Vanguard Sentinel Vocational Center to certify local school-based and employer-based training programs and to credential individuals to meet the needs of the metalworking industry. Employees and students can become credentialed at three different levels of expertise and can specialize in multiple areas within those levels. Metalworkers currently in the workforce can assess their skills against competencies developed by and for the industry.

Results

Ohio was the first state to have a NIMS-certified vocational metalworking program, at Vanguard Sentinel. Norton Manufacturing Company, Inc. in Fostoria was the first company in the nation to credential metalworking employees. The other participating vocational schools are completing the certification process.

> "The National Metalworking Skills Standards offered through Vanguard Sentinel Vocational Center help us remain competitive in the global market."
>
> **Aurice Hoover**
> Vice President of Operations
> Norton Manufacturing Company, Inc.
> Fostoria, Ohio

Reducing Employee Turnover Through Pre-Employment Training

Since working together with Eastland Joint Vocational School, we have seen dramatic improvement in our workforce. Spending time up front to develop communication and teamwork skills, as well as introducing employees to a total quality style of working, has elevated our workforce to a new level.

Dave Tharp
Manager, Human Resources
Pilkington—Libbey-Owens-Ford
Auto Glass Replacement
Distribution Center
Columbus, Ohio

Eastland Joint Vocational School District was contacted by Pilkington—Libbey-Owens-Ford to develop a customized pre-employment training program that focused on continuous quality improvement through process improvement teams.

Challenge

Pilkington—Libbey-Owens-Ford in Columbus is the worldwide distribution center for the company's auto glass replacement industry. The company wanted to implement pre-employment training to reduce employee turnover. The company's management team determined that the customized training needed to focus on communication skills, teamwork, problem solving and an introduction to a total quality style of work.

Solution

Eastland Joint Vocational School developed a 16-hour Continuous Quality Improvement training class that the company would require all prospective employees to take. Training was first completed for existing employees, and now all new employees starting at the company undergo the same training.

Results

One hundred percent of the company's employees have received the training, and nearly 95 percent of job applicants completing the program have been hired by the company. In fact, Pilkington—Libbey-Owens-Ford no longer hires individuals who have not completed the program. The pre-employment training has resulted in a 40 to 50 percent reduction in employee turnover, increased employee participation in process improvement teams, and increased job satisfaction. The program has helped Pilkington—Libbey-Owens-Ford become a more successful competitor by improving employees' problem-solving skills and communication skills.

Cost-Effective Consortium Approach to ISO 9000 Certification Training

Jefferson Community College in Steubenville worked with a consortium of companies, including Barium and Chemicals, Inc. and the National Colloid Company, to develop training for ISO 9000 certification.

Challenge

Several companies in the Jefferson Community College service area faced increasing pressures to improve their quality systems in order to compete in the global marketplace. The companies wanted to find a cost-effective alternative to the many high-priced, pre-packaged ISO 9000 certification training models on the market.

Solution

Jefferson Community College, a member of the EnterpriseOhio Network of Business and Industry Training Centers, chose to develop an ISO 9000 consortium that allowed several companies to share the cost of providing qualified consultants and trainers. Through this consortium approach, each company shared learning experiences and also received one-on-one consulting tailored to its specific needs. Jefferson's ISO 9000 Implementation Team developed its own training materials and used a unique delivery system. Each consortium member received 245 hours of training and customized consulting in ISO 9000 and Quality Systems from experienced, qualified auditors and trainers from the college. Each company developed an internal auditing team and cross-audited other consortium companies to draw upon their implementation experiences.

Results

The training has led to ISO 9000 certification for 60 percent of the companies in the consortium. All of the participating companies have identified concrete improvements in their quality systems. The training has helped establish consistent working methods, improve management decision making and minimize waste. Some companies have opted to pursue and achieve ISO 9000 certification, while others have set that as a goal for the near future.

> The teaching atmosphere at Jefferson Community College makes the instructors flexible and open to new ideas about how to solve problems. They make sure they find answers to the questions we can't figure out.
>
> **Debbie Venci**
> Director of Safety
> Barium and Chemicals, Inc.
> Steubenville, Ohio

New Facility Opens With Employees Fully Trained and Certified

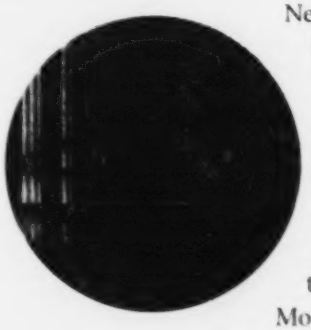
"The staff training the Ohio University Southern Campus provided for the opening of our brand-new corrections facility went far beyond the generic type of training we usually are able to provide on an agency level. As a result, we were ready to step up and get the job done the day we opened."

Norm Townsel
Superintendent
Ohio River Valley Youth Center
Franklin Furnace, Ohio

The Ohio University Southern Campus's Center for Development in Ironton collaborated with the Ohio Department of Youth Services to open the new Ohio River Valley Youth Center facility in Franklin Furnace with a fully trained and certified staff.

Challenge

The Ohio Department of Youth Services faced an extremely tight deadline for training all the employees required to open and staff the newly-constructed Ohio River Valley Youth Center. The challenge was to quickly and effectively recruit, select and train the initial staff of the facility.

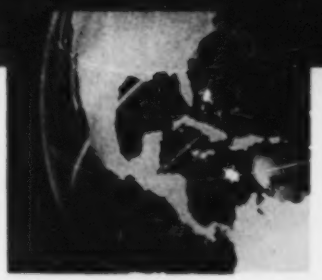


Solution

The Ohio Department of Youth Services prescribed a specific, well-defined, pre-service training program for nine hiring groups. In response to those requirements, the Ohio University Southern Campus Center for Development, a member of the EnterpriseOhio Network of Business and Industry Training Centers, designed and delivered the Ohio River Valley Youth Center's training program. Key components included first aid and cardio-pulmonary resuscitation, cultural diversity, nonviolent crisis intervention, stress management and quality improvement.

Results

Nearly 250 personnel, including custodial and professional staff, were trained. All of the employees trained achieved the required certifications in the skill areas critical to their individual jobs. Most importantly, the training was completed on schedule, and the Ohio River Valley facility opened with a capable, fully trained and certified staff.



Simulated Production Program Reduces Employee Pre-Screening and Training Costs

Scioto County Joint Vocational School collaborated with Vinyl Kraft, Inc. to design a simulated production training program that would enhance employee recruitment efforts, reduce employee turnover and decrease training costs.

Challenge

Vinyl Kraft, a manufacturer of vinyl windows, was experiencing rapid growth, high employee turnover and high training costs. As a result, the short-term need for production outgrew the company's capability to assess and evaluate job candidates. Many new hires quickly became disenchanted with production work because they were not well matched to the specific job requirements and, therefore, left the company.

Solution

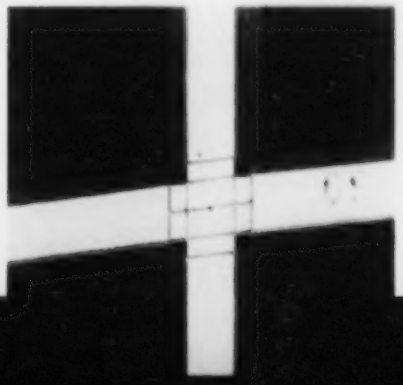
Scioto County Joint Vocational School and Vinyl Kraft co-designed a specific academic and simulated worksite program. The training targeted low-income individuals and was offered through the Community Action Organization of Scioto County and the Scioto County Department of Human Services. Further leverage of funding and services was provided by the Ohio Industrial Training Program. Scioto County Joint Vocational School delivered 145 hours of intensive training to the job-seeking candidates. Performance measurements included tolerance to high repetition, manual dexterity skills, basic mathematics skills and consistent attendance. Candidates who successfully completed training requirements entered a hiring pool from which Vinyl Kraft could obtain employees.

Results

Forty individuals successfully completed all of the training requirements. Thirty-nine of those trainees were hired by Vinyl Kraft, including six females and three minorities. Prior to the program, the company did not have any female production employees. In addition, as a result of the program, Vinyl Kraft realized major savings in hiring and training costs because they did not incur the expense of pre-screening candidates. The company also experienced a significant decrease in employee turnover because employees had experience with the requirements of the job before they were hired.

"Scioto County Joint Vocational School's training program gave us tremendous insight into the competencies and interests of prospective employees. The individuals we hired very quickly became full members of our production team."

Jeff Keller and Gary Parsley
Owners
Vinyl Kraft, Inc.
New Boston, Ohio



Customized Training Matches an Employer's Specific Protocol

"The partnership between Akron Public Schools and Akron General Medical Center has enabled us to hire qualified graduates as nursing assistants. The partnership serves the Akron community well."

Debby Berkey
Vice President, Nursing
Akron General Medical Center
Akron, Ohio

Akron Public Schools' Adult Vocational Services and Akron General Medical Center are partners in the Nurse Assistant Training Program, which is designed to train graduates to meet the specific hiring needs of Akron General Medical Center.

Challenge

In order to provide effective care for acute-care patients, nursing assistants at Akron General Medical Center are required to have skills beyond the state of Ohio's Nurse Aid training requirements. They are accountable, for example, for reporting major patient care problems. Akron General Medical Center needs nursing assistants who are trained to meet specific nursing protocol required for the Center's acute-care setting.

Solution

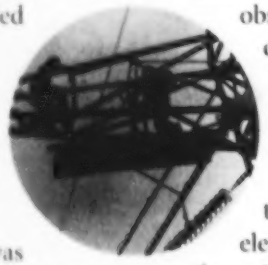
Akron Public Schools' Adult Vocational Services developed an 800-hour acute care training program for nurse assistants specifically designed to meet the needs of Akron General Medical Center. The Medical Center provides a four-week clinical setting for these students while they are in the program. The course includes the state certifying program for long-term care nursing assistants as well as a nursing home clinical experience. Students are also given the opportunity to take the state qualifying test for nursing assistants.

Results

Over the past five years, Akron General Medical Center has hired 64 graduates of the Akron Public Schools' nursing assistant program. In October 1996, Akron General Medical Center received the Partner of Change Award, which honors businesses that support the education and employment efforts of women in transition. It was one of only 50 such awards presented nationally by the National Network of Women's Employment.

School-to-Work Partnership Addresses Future Need for Electricians

Owens Community College, a member of the EnterpriseOhio Network of Business and Industry Training Centers, has collaborated with several Toledo-area labor unions and general contractors to create a School-to-Work partnership focused on meeting the area's declining supply of qualified entry-level electrical workers.



Challenge

The Toledo Chapter of the National Electrical Contractors Association was faced with declining numbers of applications to enter its registered apprenticeship program. Concurrently, the International Brotherhood of Electrical Workers Local 8 needed more applicants for its apprenticeship program in order to meet the needs of general contractors in the Toledo area. The initial challenge was to increase the number of individuals who identified electrical work as their first career choice.

Solution

With the support of Owens Community College, the partnering organizations formed the Toledo Electrical Joint Apprenticeship and Training Committee to develop pre-apprenticeship experiences to identify students who wanted to become electricians. The School-to-Work program provides students at six area high schools and one vocational school with opportunities to work in the construction industry during their senior year. Students work one week on the job and attend school during alternating weeks in order to obtain guided observations and a realistic orientation to the electrical industry and an electrician's work. Graduating seniors with strong work records and the desire to become electricians are accepted into the residential training program. Owens Community College serves as a liaison between the unions and the public schools to facilitate program implementation and to provide training for the contractors on how to work with the students and provide the most supportive environment.

Results

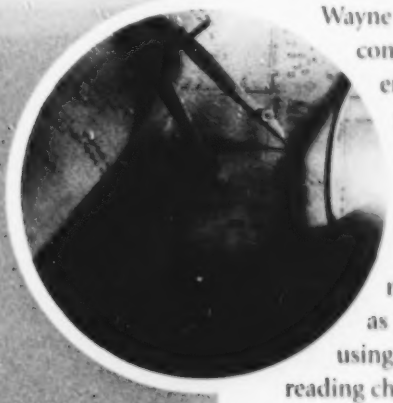
There has been an increase in the number of interested, capable electrical apprenticeship candidates who identify electrical work as their first career choice. In addition, prospective employers have opportunities to assess students' skills and their growth potential in the electrical industry. Because the initial program has been so successful, sheet metal workers and carpenters are developing similar models.

> "More and more employers are getting involved in our pre-apprenticeship program because they see that it can save money in the long run by improving the hiring process. We couldn't have done it without the help Owens Community College has provided."
>
> **Dave Wellington**
> Training Coordinator
> International Brotherhood of Electrical Workers, Local 8
> Rossford, Ohio

Improving Performance by Developing Employees' Math Application Skills

We have developed a true partnership with Wayne College that allows us to work together to meet our training needs. The Wayne College instructors are committed to understanding and meeting our expectations.

Connie Poulton
Manager of Human Resources
Wayne-Dalton Corporation, Rolling Door Division
Dalton, Ohio



The University of Akron's Wayne College, an affiliate of the EnterpriseOhio Network of Business and Industry Training Centers, helped Wayne-Dalton Corporation's Rolling Door Division develop a mathematics application assessment instrument to improve company performance.

Challenge

Wayne-Dalton hired a consultant to perform a survey of employee morale and perceptions of the company. Employees indicated a strong desire for increased and improved training programs. In exploratory dialogues with Wayne-Dalton, Wayne College staff helped identify an immediate need for training focused on mathematics application skills. Shortcomings in this area were resulting in high scrap levels and a frequent need for rework.

Solution

Wayne College helped the company improve employees' functional mathematics literacy. Focus group techniques and a customized mathematics assessment instrument identified the mathematics skills — such as reading tape measures, using micrometers and calipers, reading charts or computing precise measurements — needed to perform various jobs throughout the plant. The College designed and administered the assessment instrument for all 180 hourly employees. The College then tailored a functional math course to meet the needs of all employees scoring below 80 percent on the test. The course design was based on documentation provided by the company and emphasized realistic, practical problems such as interpreting work orders and reading blueprints, graphs and charts.

Results

Most re-test scores increased 20 percent or more, and 80 percent of the employees successfully completed the course. Following the success of the basic functional mathematical training, Wayne College and Wayne-Dalton have started an advanced math training program and a blueprint reading program in which more than 50 percent of the company's employees are participating on a voluntary basis. Today, turnover is less than eight percent, there are fewer customer complaints, sales have increased, profits are up and workers' compensation costs due to accidents are under control.

Maintenance Apprenticeship Program Reduces Production Downtime

Miami Valley Center for Business and Industry, a division of the Butler County Joint Vocational School District, initiated a maintenance apprenticeship program designed specifically to help Hudson Specialty Foods reduce production downtime on the second and third shifts.

Challenge

Hudson Specialty Foods processes fully-cooked, portion-controlled meat and poultry products for wholesale to restaurants and food service businesses. As a natural consequence of worker seniority, the most experienced and highly trained maintenance workers were clustered on the first of the company's three shifts. The result was that the second and third shifts experienced a higher rate of production downtime due to less experienced workers not having all of the skills needed to adequately maintain production equipment.

Solution

The Miami Valley Center for Business and Industry designed a two-year, 400-hour training program that concentrated on routine mechanical and electrical maintenance of the equipment at Hudson Specialty Foods, including how to troubleshoot and repair critical equipment breakdowns. The overall goal of the customized program was to reduce machine downtime and the resultant production loss by improving employee skills and increasing the overall quality and thoroughness of equipment maintenance. The program took place on-site to minimize workers' time away from the job and to eliminate the logistics of transporting employees to a separate training facility.

Results

Hudson Specialty Foods has experienced a significant decrease in maintenance-related downtime since the program's initiation, which has resulted in millions of dollars in savings per year. All work teams at the facility are reaching their projected production and profit goals. There is virtually no turnover, and lost time due to injuries has decreased. Employees have also gained increased awareness regarding the importance of their function to the overall operation of the company.

"The training provided by the Miami Valley Center for Business and Industry is tailored to the specific needs of our company, which allows us to accelerate the training of our employees and to keep a team of qualified employees in place."

Mike Clark
Maintenance Manager
Hudson Specialty Foods
Cincinnati, Ohio

ISO/QS 9000 Training Program Targets Specific Needs of Small Businesses

"Penta County Vocational School's ISO/QS 9000 training program was excellent. What we learned from the program, and how we applied the training, have enabled us to achieve ISO registration and improve our efficiency."

Gary Durivage
Vice President, Operations Manager
Durivage Pattern & Manufacturing, Inc.
Welliston, Ohio

Penta County Vocational School's Adult and Continuing Education Division offers cost-effective professional consulting services specifically designed to meet the unique needs of small businesses seeking ISO/QS 9000 registration.

Challenge

Small businesses working to meet the challenge of competing in the global marketplace often begin by looking for help with their efforts to improve quality. One way many companies are responding to this challenge is by incorporating quality management systems and seeking ISO/QS 9000 registration. For small businesses, however, affordability is a key issue. While there are many consulting services and professional resources available to aid companies seeking ISO/QS 9000 registration, the cost often is prohibitive, especially for small businesses.

Solution

To meet the specific needs of small businesses committed to quality management improvements, the Adult and Continuing Education Division of Penta Count Vocational School in Perrysburg developed an ISO/QS 9000 Implementation and Preparation Program. Working initially with Durivage Pattern & Manufacturing, Inc., a precision mold manufacturer in Welliston, Penta County implemented a three-step training process: (1) training on the required quality standards, (2) training on how to document the company's quality management system, and (3) training on how to conduct valid internal audits. The final stage of training also included teaching a Durivage employee to be a lead assessor, allowing the company to continue its quality improvement efforts with minimal outside consulting help.

Results

With the training provided by Penta County Vocational School, Durivage became ISO registered in 1996. This has enabled the company to attract additional clients and improve overall efficiency. In the last two years, Penta has entered into new partnerships with eight additional Toledo-area companies that are participating in the ISO/QS 9000 registration process.

Internal Auditor Training Supports Continuous Improvement Strategy

Lima Technical College and BP Chemical, Inc. in Lima partnered to design and deliver internal auditor training in support of the company's continuous improvement strategy.

Challenge

Like companies around the world, BP Chemical, Inc. has recognized the strategic importance of maintaining ISO 9000 certification. Among the certification criteria are procedures for planning and implementing internal quality audits to verify that quality activities and related results comply with planned arrangements and to determine the effectiveness of the quality system. These periodic self-assessments lead to system modifications and support continuous improvement of operations. BP Chemical called upon Lima Technical College, a member of the EnterpriseOhio Network of Business and Industry Training Centers, to develop the capability of internal personnel to conduct these internal audits.

Solution

Lima Technical College and BP Chemical partnered in the collaborative design and delivery of internal auditor training for the petro-chemical industry. The training program included the basics of internal auditing as required in the ISO 9000 quality system model; application of a computer network based on scheduling, reporting and communication software; and a variety of health and safety awareness issues the trainees must deal with in their roles as internal auditors. The training was delivered on the Lima Technical College campus as well as on-site at BP Chemical facilities. The Lima Tech instructors used the BP Chemical computer network for the "hands-on" applications of the computer software. In this distinctive project, the curriculum was tailored to fit the exact nature of the petro-chemical environment.

Results

The training enabled BP Chemical, Inc. to develop internal staff capability to conduct its own internal ISO 9000 audits and successfully pursue and maintain ISO 9000 certification.

"After using others to conduct our internal audit training classes, we chose Lima Technical College's program because it could be customized to our needs and it was cost-effective. We were so pleased with LTC's performance that we sent them to a Texas facility to conduct additional training."

Vincent Buchtman
Quality Systems Manager
BP Chemical, Inc.
Lima, Ohio

Responding to Healthcare Labor Shortages by Training Welfare Recipients

"Through the Health Care 2000 program, Cincinnati State has helped to provide us with a cost-effective resource for workers who are well-trained and who are willing and eager to work full-time."

Stephanie Lichtenberg
Director of Human Resources
Comprehensive Healthcare
Cincinnati, Ohio

Cincinnati State Technical and Community College, a member of the EnterpriseOhio Network of Business and Industry Training Centers, has collaborated with the Hamilton County Department of Human Services and various nursing facilities and home health agencies in the Greater Cincinnati area in the development of Health Care 2000 to meet a growing need for qualified nurse aides and home health aides.

Challenge

While qualified nurse aides and home health aides are in short supply, persons receiving public assistance are potential candidates for these jobs. The challenge was to develop a training program and related strategies to tap that resource pool, satisfy employer demand for qualified workers and successfully support the transition of job candidates from public assistance to employment in the healthcare field.

Solution

Cincinnati State Technical and Community College, in collaboration with Hamilton County Department of Human Services, developed the Health Care 2000 program to provide training to public assistance recipients to prepare them to work as nurse aides and home health aides.

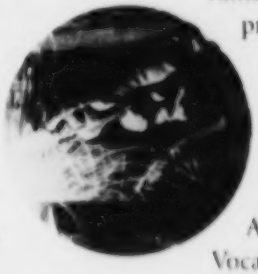
Participating employers "sponsor" promising job candidates who are Temporary Assistance to Needy Families (TANF) recipients and agree to employ them on a trial, part-time basis. The employer also pays for their training provided by Cincinnati State Technical and Community College. Following the training, the employer enters into a contract with the Department of Human Services. In return for providing the recipient with a full-time position, the employer receives approximately $350 per month for a maximum of nine months from the Department of Human Services.

Results

More than 90 percent of the individuals entering the program are employed in the healthcare field. The program is satisfying employer demands for good workers, enabling public assistance recipients to join the ranks of the employed and reducing the need for public welfare support.

Matching Skills to Job Requirements to Ensure Quality Control

Vantage Vocational School in Van Wert certifies local workers in four difficult welding certification categories offered by the American Welding Society (AWS), which allows employers such as Midwest Certified Boom Repair in Celina that use welding assemblies in their products to be sure of an applicant's specific skill level.



Challenge

Welders have various skill levels, which may limit the specific welding process, position or material thickness the person is qualified to use. As the demand for welders increases, it is a challenge for companies to find and hire qualified individuals with appropriate skill levels matched to job requirements. Midwest Certified Boom Repair uses welders in the assembly of crane booms and needs workers who are certified in specific welding areas.

Solution

Vantage Vocational School is the only secondary school in the United States that is accredited by the American Welding Society to operate as a national welder certification testing facility. By offering AWS certifications for local workers, Vantage Vocational School enables employers such as Midwest Certified Boom Repair to recruit local workers with specific AWS welding certification skill levels. In addition, AWS welders certified through the Vantage Vocational School program have a portable credential that enables them to compete in a global economy. By meeting the strict requirements to become an AWS test facility, Vantage Vocational School also is accredited to provide area industries with technical welding consultants, industrial trainers and inspectors.

Results

Since the program's inception three years ago, more than 200 adult and high school welding students have been certified and 99 percent of them are employed. Companies in and near the Van Wert area specifically seek welding students trained by Vantage Vocational School. All welders employed by Midwest Certified Boom Repair were certified by Vantage Vocational School.

"The certification program offered by Vantage Vocational School is the only way we can meet our quality control needs. We do not hire applicants who are not AWS certified."

Frank Dues
Foreman and part-owner
Midwest Certified Boom Repair
Celina, Ohio

Partnering With Local Industries to Prepare Qualified Machinists

> Belmont Technical College was easy to work with, accommodating of our needs and receptive to our ideas. We saw a dramatic increase in the skill level of the machinists who participated in the training program they administered.
>
> **Jim Bartlett**
> Human Resources Manager
> American Electric Power
> Lancaster, Ohio

Belmont Technical College and Belmont Harrison Career Center in St. Clairsville have partnered with American Electric Power, Mayflower Vehicle Systems and other eastern Ohio employers to provide training in tooling and machining on a technical college level.

Challenge

American Electric Power, Mayflower Vehicle Systems and other employers in eastern Ohio with increased technical needs have found it difficult to recruit mature, qualified, skilled machinists. Some of these employers have missed contract delivery deadlines because advertisements publicizing job openings for machinists went unanswered.

Solution

Belmont Technical College, a member of the EnterpriseOhio Network of Business and Industry Training Centers, established a partnership with Belmont Harrison Career Center to offer college-level technical training in tooling and machining. With collaborative support from the business community and Sinclair Community College, this partnership created customized Tooling and Machining Programs to ensure a capable workforce for American Electric Power, Mayflower Vehicle Systems and other companies. To provide additional training for the public, Belmont Technical College also started a Certificate Program in Tooling and Machining. These programs help to meet the crucial employment needs of eastern Ohio businesses and industries.

Results

Twenty-four machinists have been trained to master the more than 55 competencies that American Electric Power requires; as a result, employees' skill levels have increased and company operations have become more efficient. Eighteen employees of Mayflower Vehicle Systems have become involved in a related two-year apprenticeship training program. In addition, other eastern Ohio employers have hired graduates of the new certification program.

Skill Assessment and Remediation Upgrade Employees' High-Tech Capabilities

The Columbus Public Schools' Department of Community Education is engaged in an ongoing partnership with Techneglas, Inc., in which skill assessment is used to identify incumbent employees who require remediation to meet emerging high-tech job requirements.

Challenge

Techneglas, Inc., a manufacturer of glass components of cathode ray tubes for the television and computer industries, needs qualified skilled workers to troubleshoot and repair complex electronic production and measurement systems. Many of the company's existing journeymen apprentices completed their training prior to the evolution of electronics. Candidates for new apprenticeship positions are drawn from the company's production workforce, many of whom lack the production skills needed to successfully complete a technical apprenticeship. Techneglas needed an assessment system that would not only assess employee aptitudes for skilled trade positions, but also would develop skills and close the gap between job requirements and employees' skill levels.

Solution

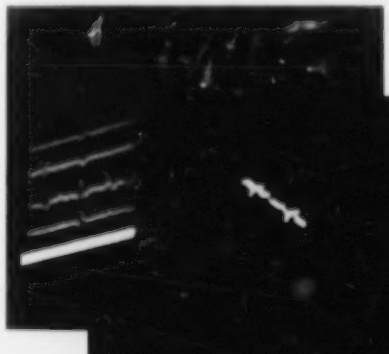
Management, union and apprenticeship representatives from Techneglas worked with the Columbus Public Schools' Department of Community Education to develop a customized assessment and remediation system. All employees are eligible to complete academic and mechanical assessments and then to receive counseling on how their skill levels compare to their career goals and the company's goals. Appropriate remediation is provided at the Columbus Public Schools' Skill Enhancement Lab. On-site computer work stations are now installed at Techneglas to be used for both remediation and advanced training. In addition, Columbus Public Schools is working with Techneglas on job-profiling, pre-employment training and assessment validity studies.

Results

More than 400 Techneglas employees have been tested by the Columbus Public Schools' Department of Community Education. Forty-seven employees currently are training in apprenticeship programs, while many others are participating in other semi-skilled training programs.

"The staff at Columbus Public Schools' Department of Community Education are tuned in to our need to enhance the technical abilities of our employees. They bring a level of assessment and training expertise that we simply do not have."

Kathy Finnie
Industrial Relations Director
Techneglas, Inc.
Columbus, Ohio



Training Enables Growth-Responsive Development of Corporate Culture

"Sinclair Community College is a progressive organization that is attentive to the needs of business. They are very user-friendly and have been willing to modify their staffing to meet our specific needs."

Melanie Luckenbach
Director, Reynolds University
The Reynolds and Reynolds Company
Dayton, Ohio

Sinclair Community College in Dayton and The Reynolds and Reynolds Company implemented training to incorporate teamwork and team problem solving concepts into the company's corporate culture.

Challenge

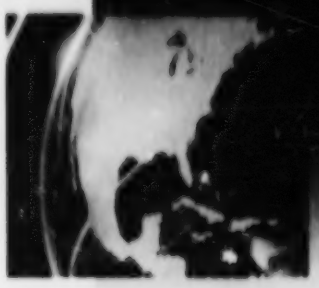
The Reynolds and Reynolds Company, a leading information management company, serves the general business, automotive and healthcare markets. The Reynolds and Reynolds Company recognized that its rapid expansion had created a concurrent need to develop the ability of employees to work as team members in an evolving team culture. The company also recognized that to achieve its corporate vision and growth-related goals, it would need to provide training and other supports that develop and reinforce problem-solving approaches while building core competencies. It also recognized a need to provide other continuous learning opportunities to enable employees to achieve the highest performance levels.

Solution

The Reynolds and Reynolds Company selected Sinclair Community College, a member of the EnterpriseOhio Network of Business and Industry Training Centers, to develop and implement training to infuse the new company culture with the latest management and leadership concepts and practices. More than 2,000 associates have received training in team communications, team problem solving and techniques for providing feedback to team members.

Results

Reynolds and Reynolds associates have reported saving a significant amount of time as a result of the improved teamwork, problem solving and employee knowledge and skills developed through the training provided by Sinclair Community College. The Reynolds and Reynolds Company has made teamwork and shared problem solving a core component of its new corporate culture.



Developing a Pool of Qualified Workers Through School-to-Work

Lorain County JVS created a six-week School-to-Work training program for INVACARE Corporation in Elyria to increase the availability of qualified technical workers.

Challenge

INVACARE Corporation is the world's leading manufacturer and distributor of home health care and mobility products for people with disabilities. To ensure the company's long-term growth, INVACARE Corporation needs to attract qualified technical personnel.

Solution

With assistance from the Workplace Institute of Lorain County, Lorain County JVS designed and implemented an intense School-to-Work program to address INVACARE's workforce development needs. During a paid, six-week training program, high school students participate in three hours of daily classroom instruction and four hours of work-station instruction. The classroom training is conducted by Lorain County JVS instructors and INVACARE employees. The training focuses on an introduction to manufacturing technology skills, mathematics, blueprint reading, applied communications, team building and new manufacturing processes. Students gain hands-on experience by rotating through the production, engineering, quality control, computer numeric control and computer-aided design departments. Students also are given the opportunity to identify and implement process improvements in INVACARE's manufacturing facility.

Results

Six high school students have successfully completed the program, resulting in a qualified pool of prospective employees for INVACARE. Additionally, process improvement recommendations from the training class have significantly increased employee productivity. For example, one change in layout and design to improve the flow of materials realized a 60 percent increase in productivity after two weeks of implementation. Human resources personnel also report that having the students in the workplace has enhanced employee morale and company pride.

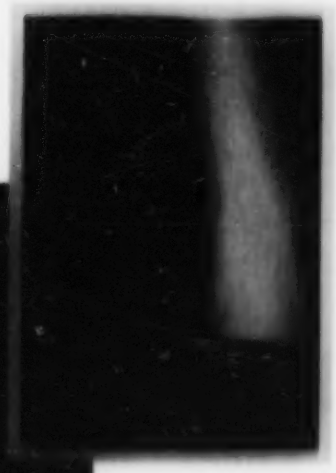
"The Lorain County JVS has helped us develop a potential future workforce that possesses the technical skills needed to be successful and contributing members of our team."

Larry Steward
Vice President of Human Resources
INVACARE Corporation
Elyria, Ohio

Targeted Mathematical Training Improves On-The-Job Performance

"This program increases employee productivity and self-confidence and enables Midwest Acoust-A-Fiber to often promote from within. We have seen the results and we expect to continue the program with Delaware Joint Vocational School in the future."

Linda Wolf
Human Resources Manager
Midwest Acoust-A-Fiber
Delaware, Ohio



Delaware Joint Vocational School and Midwest Acoust-A-Fiber in Delaware have built an education/business partnership through the Adult Basic and Literacy Education/Acoust-A-Fiber Collaboration. The project targets specific mathematical skills employees need to improve their performance on the job.

Challenge

Using fiber-engineered composites, Midwest Acoust-A-Fiber manufactures heat- and sound-absorbing devices for the automotive industry. On the production floor, employees need concrete knowledge of fractions, decimals, conversions and the metric system in order to accurately measure parts and materials. The challenges were first to determine the specific mathematical skills required for particular departments, and then to identify the best ways to assess employees' current skill levels in mathematics, offer mathematical instruction for employees of all three shifts and maintain production standards.

Solution

Professionals from the Delaware Joint Vocational School collaborated with members of Midwest Acoust-A-Fiber's existing training team to develop mathematics classes tailored to meet the company's needs. Classes provide instruction in gauge reading, product measurement and mathematics skill enhancement. Post-tests given on an individual, as-needed basis allow many employees to refresh their skills and move quickly from the classroom back to the production area. Others receive intensive, longer-term instruction.

Results

Delaware Joint Vocational staff assessed the math skills of 104 associates company-wide. Of the initial 104, half have begun classes and 37 have completed the training. Standards on the job have improved for at least 75 percent of those receiving instruction. During the past year, scrap has been reduced to less than three percent, there have been no major complaints by customers, and returns are at a minimum. Six production operators who received GEDs were promoted to positions requiring mathematics skills, and seven additional associates have expressed a desire to attend company-sponsored GED classes.

Multi-Agency Partnership Meets Workforce Needs Through Tech Prep

As part of Ohio's Tech Prep program, the Ohio Board of Regents, the Ohio Department of Education, the Ohio Department of Development, representatives of the plastics industry, and educators from Ohio's vocational high schools, colleges and universities are working to meet long-term workforce development needs for the state's plastics industry.

Challenge

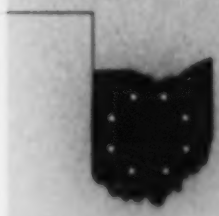
Plastics is one of Ohio's fastest growing industries. Members of the Polymer Processors Association, the Society of Plastics Engineers and plastics industry leaders sought assistance from the Department of Development to develop qualified and highly skilled plastics/polymer technicians needed by the industry.

Solution

The Department of Development joined Ohio's Tech Prep program through the Board of Regents and the Department of Education to develop a statewide plastics core curriculum for students in high school and higher education. First, more than 90 representatives of various plastics companies and their education partners worked to identify the core academic, employability and occupational skills needed by students pursuing careers in the plastics industry. Next, a comprehensive statewide plastics/polymer training curriculum for students in high school, apprenticeships, and higher education was developed and implemented. The Plastics Technical Competency Profile, a comprehensive list of academic and occupational competencies identified by the plastics industry, was published and provided to all participating schools, colleges, universities and plastics employers.

Results

More than 50 high schools and colleges are currently implementing Ohio's plastics/polymer curriculum. Through this unique multi-agency partnership, educators and industry representatives have shared their expertise to improve education and training, job marketing strategies and laboratory facilities for the plastics industries throughout Ohio.



"State government bent over backwards to help the plastics industry put the Technical Competency Profile project together. It is a key long-term strategy for enabling the industry to overcome a tight labor market."

Chris Chrisman
Executive Director
Polymer Plastics Association
Akron, Ohio

Certification Program Provides Qualified Workers for Food Service Industry

> "Every time one of our employees takes the class offered by Springfield-Clark Joint Vocational School, we end up doing a better job of paying attention to the things we are supposed to. There is a definite correlation between the training and the reduction in critical violations on our health inspections."
>
> **Scott Griffith**
> President
> Lee's Famous Recipe
> Springfield, Ohio

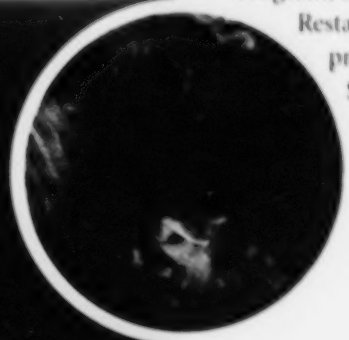
Springfield-Clark Joint Vocational School is meeting the workforce needs of the food service industry in Clark County through its SERVSAFE Certification Program, which ensures that employees are adequately educated and trained in food safety and sanitation principles and are qualified to work in the food service industry.

Challenge

Local food service operations, from fast food restaurants to fine-dining establishments, depend on a qualified and certified workforce. Increased state health standards, in particular, require well-trained, well-educated employees. Complicating this challenge is the fact that the food service industry experiences high turnover.

Solution

The SERVSAFE Certification Program, created by the National Restaurant Association and provided by the Springfield-Clark Joint Vocational School, enables food service establishments to train new and existing workers to meet state health codes. The 64 hours of training cover Ohio laws that pertain to food and facilities, personal hygiene, proper food handling and storage, hazard analysis, critical control point principles, crisis management and local health department sanitation. The training, consistent with both the FDA's and the USDA's new approach to food safety, concludes with an examination and training certificate.



Results

The first certification program in the Springfield area was held in the fall of 1996, and 18 participants were successfully certified. In the last two years, Lee's Famous Recipe, a Springfield restaurant with six locations, has certified 10 managers, assistant managers and relief managers, and expects to certify more employees in the future. The certification training has significantly reduced the number of critical violations on the company's health inspections.

Consortium of Companies Acquires New Employee Selection Resource

Cuyahoga Community College's Business Community and Economic Development Division partnered with Cleveland's Westside Industrial Retention and Expansion Network and the Cleveland Public Schools' Adult and Continuing Education Division to develop a new entry-level training program and employee selection process for local manufacturers.

Challenge

The Westside Industrial Retention and Expansion Network (WIRE-NET) is a community and economic development organization that represents 120 manufacturers on the west side of Cleveland. The consortium's members include plastics fabricating, precision grinding and foundry equipment production companies. Two major workforce problems for many member companies were (1) difficulty finding qualified applicants for a variety of entry-level positions critical to company operations, and (2) frequent new hire turnover.

Solution

On behalf of its member companies, WIRE-NET asked the Business Community and Economic Development Division of Cuyahoga Community College, part of the EnterpriseOhio Network of Business and Industry Training Centers, for assistance. Working collaboratively with representatives of WIRE-NET and the Cleveland Public Schools, the college designed a Skills in Modern Manufacturing training program. This five-week customized manufacturing training program was designed to provide a pre-employment experience for potential job candidates. The program combined classroom training and paid on-the-job training that enabled participants to become familiar with a company's work environment and to gain knowledge and skills related to job safety, blueprint reading, workplace math and a number of other basic skill areas.

Results

At the end of the five-week program, 100 percent of the trainees were offered and accepted full-time employment and benefits with their sponsoring companies in positions such as machine operators, shipping clerks and support clerks.

"Cuyahoga Community College's training program met our company's need to hire and retain employees with the necessary skills. We would actively participate in the program again."

Monica Toth
Sales and Marketing Manager
Universal Grinding
Cleveland, Ohio

Supervisory and Communication Skills for a Team-Based Environment

> "Kent State University Tuscarawas Campus is an effective local resource for training. Having the trainer deliver the training at our company site was convenient for work schedules and time-saving for our employees."

Tim McGrail
Human Resources Manager
Coshocton/Kraft Foods
Coshocton, Ohio

Kent State University Tuscarawas Campus in New Philadelphia collaborated with Kraft Foods in Coshocton to expand employee capabilities required for a team-based working environment.

Challenge

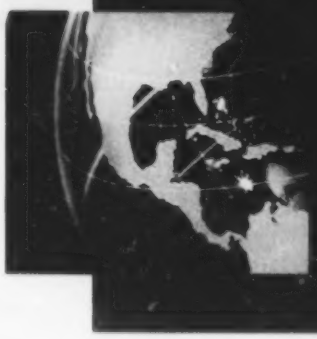
A ten-year pattern of tremendous growth and a doubled workforce at Kraft Foods had resulted in a high number of associates for each supervisor and a critical need for team-building and teamwork skills. Increasingly, the company needed new supervisors who not only had strong technical skills, but also were well-trained as strong team-builders and leaders. In particular, they needed to develop problem-solving skills, listening skills, oral and written communication skills, planning skills and techniques to foster working teams.

Solution

Kent State University Tuscarawas Campus, a member of the EnterpriseOhio Network of Business and Industry Training Centers, worked closely with Kraft Foods' trainer and human resources manager to develop and implement an 18-hour Supervisory Skills Building Series to teach supervisors how to cultivate and manage a team-based work environment. Subsequently, when staff identified a related need to develop problem-solving skills among line technicians, which was a new job classification, Kent State University Tuscarawas Campus developed and implemented a 36-hour training program — Problem Solving Using the 8-D Method — that helped hourly workers effectively make the transition to crew leaders.

Results

Training provided by Kent State University Tuscarawas Campus has resulted in markedly improved listening and communication skills among all levels of Kraft Foods employees. To develop their skills even further, supervisors have requested and continue to participate in advanced supervisory training.



Leadership and Technology Training Improves Employee Relations

The Ashland County–West Holmes Career Center and Bosch Braking Systems Corporation jointly implemented Leadership Development and Technology Training to strengthen relations between supervisors and their employees.

Challenge

Bosch Braking Systems is a brake parts manufacturing company that serves both automotive and truck manufacturers with machining and metal finishing. The company faced three distinct workforce development challenges: (1) overcoming the changing environment brought by a change of ownership over a three-year period; (2) building and improving labor-management relations by building team values; and (3) contributing to the overall continuous improvement efforts of the company.

Solution

Ashland County–West Holmes Career Center developed the Leadership Development and Technology Training program to address the challenges identified by Bosch. To build productive relationships among employees and improve the overall work environment, the Career Center provided leadership training to supervisory staff, including problem-solving, team building and communications skills. To facilitate the productive use of computer technology, computer training was implemented at all employee levels, from engineers to production supervisors. Whenever possible, the training was delivered in a way that fostered teamwork.

Results

Forty-two percent of Bosch supervisors, including all second-shift supervisors, are currently taking, or have taken, leadership training classes at the Ashland County–West Holmes Career Center. A strong correlation between grievance settlements and leadership training has been demonstrated. The cost of second-shift grievance settlements has decreased 51 percent. In addition, more of these grievances are being settled at the supervisor level than were in 1996. The computer training has yielded quality improvements in word processing, spreadsheet development, data analysis, file management and presentations.

"Through our partnership with the Ashland County–West Holmes Career Center, a number of our associates have been able to increase their levels of computer literacy and supervisory skills. We at Bosch look forward to fostering our relationship with the Career Center."

Cindy Cominsky
Training Leader
Bosch Braking Systems Corporation
Ashland, Ohio

Tech Prep Mentoring Program Prepares Automotive Industry Technicians

"The partnership with the Miami Valley Tech Prep Consortium has worked extremely well. Cars today are more sophisticated than ever, using complex computer technology, and the mentorship program has helped our dealers find and hire qualified technicians trained to repair them."

Jimm Horvath
Executive Director
Dayton Area Auto Dealers Association
Dayton, Ohio

The Miami Valley Tech Prep Consortium designed the Tech Prep Automotive Technician Mentorship Program, which involves students from vocational centers in Dayton, Clayton, Xenia and Kettering, to address the ongoing workforce development needs of 38 dealerships that are members of the Dayton Area Auto Dealers Association.

Challenge

In an industry where the profit center is less in the sale of automobiles and more in their maintenance and repair, the skills of automotive technicians are pivotal to the success of members of the Dayton Area Auto Dealers Association (DAADA). Advances in automotive engineering and technology, which change annually with new models, require today's automotive technicians to combine standard manual skills with an increased ability to learn and assimilate complicated information on auto repair and maintenance.

Solution

In the Miami Valley Tech Prep Consortium project, a screened Tech Prep Automotive Technician student is placed with a DAADA dealership mentor for paid worksite-based learning as early as the summer preceding his or her senior year. The placement is for a minimum of two years and may be continued during the community college level of the Tech Prep program. Student progress is monitored and evaluated cooperatively by the industry mentor and the vocational center, in accordance with the student's work plan and the program guidelines.

Results

The program has grown from fewer than 15 students and dealerships to its current level of 38 dealerships and more than 50 students. Program administrators predict nearly 100 percent transition into full-time employment for the first class of students who will complete the four-year program in 1998. Technician mentors report high levels of satisfaction with the program's student participants, and dealership service managers report an increased level of productivity by the mentors themselves.

Fostering Continuous Employee Learning in a High-Performance Environment

The Ohio State University Agricultural Technical Institute and Seaman Corporation are collaborating to help transform the company into a high-performance learning organization.

Challenge

Because Seaman Corporation holds continual employee learning as an ideal, the organization seeks ways to invest strategically in the personal development of its associates. Having put a variety of continuous learning opportunities in place, the company wanted to build these and other projects into a solid programmatic foundation based on company values and principles.

Solution

Seaman Corporation invited The Ohio State University's Agricultural Technical Institute, a member of the EnterpriseOhio Network of Business and Industry Training Centers, to examine company progress and refine plans for developing a high-performance workforce through continuous learning. They teamed up to design and institute *Partners in Progress*, the company's ongoing, comprehensive learning and training program. The program provides associates with learning opportunities ranging from development of foundation skills to leadership training and professional development.

Results

With 75 percent of the company's associates participating in the program, individual commitment to *Partners in Progress* continues to exceed expectations at Seaman. Associates at all levels view themselves as stakeholders in the program's results, and company surveys show improved morale and individual performance. As a result, Seaman is making significant progress toward its goal of becoming a learning organization. Measurable improvements also are apparent. Company sales increased 10.2 percent in one year, production quality improved 5 percent, and production efficiency improved approximately 10 percent overall.

"Our relationship with Ohio State-ATI has been a partnership in the truest sense of the word. They have played an important role in helping us become "a learning organization" capable of keeping up with the rapid pace of change in today's world."

Michael Searcy
Vice President, Human Resources
Seaman Corporation
Wooster, Ohio

Real-World Work Projects Build Modern Manufacturing Skills

"Students who come through the Toledo Technology Academy have the right attitude for work and hands-on experience in the basics. In a shop environment like ours, that's exactly what you want."

Mel Harbaugh
Executive Vice President
Toledo Molding & Die, Inc.
Toledo, Ohio

The Toledo Public Schools' Technology Academy combines mentoring and real-world work projects that area business and industry partners bring into the school environment to train skilled workers for technology-intensive industries in the Toledo metropolitan area.

Challenge

The primary workforce development challenge for the manufacturing, engineering and plastics processing industries in the Toledo area is to sustain, at the secondary school level, a reliable resource for developing a pool of entry-level skilled trades technicians with the analytical reasoning and decision-making skills needed for modern manufacturing.

Solution

The Toledo Public Schools have been addressing this ongoing workforce development issue since 1982 through the Libbey Manufacturing Engineering Technology (MET) program, which has recently been expanded to include a new Polymer/Plastics Technology (PPT) program. The Technology Academy is a four-year MET/PPT experience that provides instruction in machine systems and gives students opportunities to design and build machine systems. What is unique about the program is the partnership between the Academy, the Edison Industrial Systems Center (EISC) and local industries. Students are given real-world work assignments and projects from local business and industry, which provide experiences that cannot be simulated in a typical school-generated project. EISC, in partnership with engineering departments from participating firms, provides plans and specifications. The partner companies also provide materials, parts and mentoring. The ultimate goal is for students to experience "real-world work in real time."

Results

More than 100 Toledo-area companies have participated in the program. Program graduates, who now total nearly 200, typically have multiple employment options with local industry. In recent years, students have designed and built a commercial can crusher for Autotech Engineering, a test stand for hydraulic pump motors for Midwest Fluid Power and a yo-yo stringing machine for Duncan Toys Flambeau Corporation.

World-Class Training Investments to Match New Plant Investments

Marion Technical College, a member of the Enterprise Ohio Network of Business and Industry Training Centers, provides world-class training for Upper Sandusky's Guardian Automotive Products, Inc., a glass laminating facility that serves the automotive industry.

Challenge

As part of a transition plan, Guardian Automotive made a strategic decision to reinvest in and revitalize its 22-year-old facility for glass lamination, instead of building a new plant. The final part of this plan was a reinvestment in local human resources to train workers in the new technologies and processes, with a focused effort on the critical area of computer training. At issue was how to achieve this in a cost-effective manner.

Solution

In 1997, Marion Technical College began a partnership with Guardian Automotive to provide on-site credit courses leading toward an Associate Degree in World Class Service and Production. All services currently available to students on the Marion Technical College campus are also available on-site to Guardian Automotive associates. The degree program and partnership are based on a similar program developed for Whirlpool Corporation that has won many state and national awards.

Results

Twenty percent of Guardian Automotive's current workforce is involved in training activities provided by Marion Technical College. Scrap costs have been reduced, and overall productivity is up. The company's Human Resources Department reports that the positive associate relations and the improved working environment that have resulted from the training are worth the price of the investment the company has made to date.

"The staff from Marion Technical College found a way around every obstacle we faced in putting together our training program. The results have far exceeded our expectations."

Tom Jadlos
Human Resources Director
Guardian Automotive Products, Inc.
Upper Sandusky

Sophisticated Machinist Training for High-Technology Environments

> "The Stark State training program has really helped us in the recruiting of qualified skilled machinists. In the last year, we have hired 25-30 graduates of the program. We are impressed by everything the training curriculum covers in a short time frame."
>
> **Robert Nappi**
> Vice President, Human Resources
> Colfer Manufacturing
> Malvern, Ohio

Stark State College of Technology, a member of the EnterpriseOhio Network of Business and Industry Training Centers, created the CNC Machinist and Quality Assurance Technical Training program to serve manufacturing businesses and the local Job Training Partnership Agency (JTPA). The program trains dislocated workers to become machine operators and quality assurance technicians who are able to run lathes and milling machines and to conduct inspections, respectively, in a high-technology work environment.

Challenge

As manufacturers in the Stark County area grew and upgraded equipment to newer CNC (Computerized Numeric Control) lathes and mills, other companies that continued to use traditional, non-CNC-based machining equipment were closing because they could not compete. The upgrade created a need for workers with the necessary skills to work in the retooled, highly competitive machine shops. Meanwhile, "dislocated" workers who had lost their jobs needed to be retrained in order to regain employment.

Solution

In response to the needs of local manufacturers, Stark State College of Technology created an intensive 18-week program of lectures and hands-on training designed to transform workers with minimal technical experience into competent CNC machine operators. Class participants are trained in math, communications, blueprint reading, computer familiarization, metrology and CNC machine theory and practice. Following each 18-week session, Stark State hosts a job fair, which is attended by local employers who are eager to interview program graduates.

Results

More than 85 percent of the approximately 100 training participants have been hired into high-skilled, good-paying jobs within 60 days of graduation — evidence that local high-technology employers are finding the skilled machinists and quality assurance technicians they need. The JTPA reports that employers are very satisfied with the results of the program, which is evidenced by the 95 percent job retention rate for program graduates.

Training Welfare Recipients for Employment in the Hospitality Industry

Eastland Joint Vocational School and the Adult Vocational Education Division of Columbus Public Schools, in a cooperative effort with the Ohio Hotel and Motel Association, the Ohio Restaurant Association, the Ohio Department of Education, the Ohio Department of Development and the Franklin County Department of Human Services, have developed the Hospitality On Site Training (HOST) program to build a trained workforce for the hospitality industry in central Ohio.

Challenge

The hospitality industry continually faces an extreme shortage of trained workers, even in times of low unemployment. The challenge is to build a trained workforce to meet the needs of the industry in central Ohio.

Solution

HOST was developed in direct response to a request for help from the Ohio Hotel and Motel Association. In the program, Eastland Joint Vocational School uses the job profiling, skills assessment and training components of the Work Keys system developed by American College Testing (ACT) to screen applicants who have been identified by the Franklin County Department of Human Services. Applicant skills are matched against job profiles in convention services, housekeeping, food service and guest relations. Applicants accepted into the nine-month HOST program receive 10 hours of classroom instruction and 20 hours of paid, on-the-job training per week at one of nine participating local hotels. Skills training provided by certified instructors from the Columbus Public Schools includes goal setting, problem solving, time management, decision making, and interpersonal and intrapersonal communication. Students also receive counseling on how to handle transportation and child care issues.

Results

Thanks to the HOST program, the hospitality industry in central Ohio has access to a larger pool of trained workers. The program also is helping to solve the social and economic problem of moving individuals from welfare to work. The initial success of the HOST program has resulted in the Ohio Restaurant Association joining the project to expand employment options to area restaurants. Plans are also under way to expand the program to meet the needs of the hospitality industry in Cincinnati and Cleveland.

"We are proud to work in cooperation with Eastland Joint Vocational School, Columbus Public Schools and various local and state agencies to move people from welfare to work. It is our goal to expand the HOST program throughout the state."

Charles Lagarce
General Manager
Crowne Plaza Hotel
Columbus, Ohio